SCORPION

RUGGED TABLET & HANDHELD SOLUTIONS

SCORPION
Buyers Guide

Everything you need to know before buying our rugged tablets and industrial handhelds

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Checklist

Your checklist before buying a rugged tablet or handhelds

- ☐ **Application Field:** Will the mobile device be used indoors or outdoors?
- ☐ **1D/2D Barcode Reader:** Which codes can our scan modules read?
- ☐ **Certifications:** Which type of protection should you choose?
- ☐ **Comparison Table:** All SCORPION models in direct comparison

Before purchasing a SCORPION rugged tablet or industrial handheld, we provide you with **an essential checklist** you can go through step by step in this buyers guide.

Experience has shown that not only the most important technical questions can be clarified in advance, but also problems and misunderstandings after an order can be avoided. In this buyers guide, we inform you about the features you should look for in the hardware.

The first and foremost requirement is the application for which you want to use the rugged tablet or handheld. In general, our SCORPION devices are suitable for almost any industrial application fields, but it is important to clarify, if the mobile terminal will be used primarily for **indoor or outdoor applications** (or both).

Furthermore, we explain which scan modules are installed in the individual SCORPION models and which codes can be read by each. Our **1D/2D scanners** are only available as optional accessories on most of our rugged tablets and can be omitted if not needed.

Additionally, we'll be getting into details about the **hardware certifications** in this buying guide. All SCORPION models have a standardized MIL-STD-810G and at least IP65 certification, but the meaning of these cryptic abbreviations, will be cleared up as well.

Last but not least, we give you a significant spec sheet of all our SCORPION rugged tablets and handhelds in direct comparison. **In a tabular view**, you will find all important specifications as well as suitable accessories at a glance. More detailed information on the individual devices as well as data sheets, quick-start guides and drivers can be found online at:

Application Field

Will the mobile device be used indoors or outdoors?

As a user, you basically have to be clear about whether you prefer to use a rugged tablet or handheld indoors or outdoors. For indoor use in industrial facilities, using a MIL-SPEC certification and IP65 certification is usually sufficient. Our entire SCORPION portfolio is well equipped for this application field. But the working conditions in outdoor areas require an entirely different approach.

Do you often or occasionally have to work outside in direct sunlight?

It is important to clarify this question, because although all SCORPION's are outdoor capable, not all screens are readable in direct sunlight by default. Only with a display brightness of **at least 700 cd/m² (nits)** a device can be considered sunlight-readable. We have so-called high-brightness models in our portfolio specifically for this use case, namely the SCORPION 10X series.

The SCORPION's are suited for:

☐ Warehouses and stores
☐ Craftsmen and workshops
☐ Industrial production lines
☐ Transportation and logistics
☐ Police and fire vehicles
☐ Forklift terminals
☐ Agriculture or construction sites
☐ Drone / multicopter control
☐ Military field operations

For displays to remain readable in sunlight, a **min. of 700 nits** is required
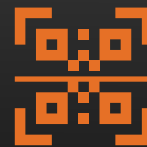
1D/2D Barcode Reader

Which codes can our scan modules read?

1D-Codes

1D codes have long been established in the industries or retail and denote a series of arranged bars forming a so-called one-dimensional code. Each of our SCORPION devices offers the possibility to read 1D barcodes, these include for example Code 39, Code 128, EAN, UPC and Code 2/5 interleaved.

2D-Codes

All SCORPION barcode readers are capable of recognizing two-dimensional codes, allowing more data to be read on the same space. This includes stacked 2D codes such as PDF417 and Codablock A as well as 2D matrices. In addition, the built-in camera also recognizes classic QR codes.

Certifications

Which type of protection should you choose?

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What does MIL-STD-810G mean?

MIL-STD-810 certifications designate a set of standardized testing methods for the U.S. military, defining, among others, the compatibility of equipment in dealing with high temperature fluctuations, atmospheric pressure, humidity, vibration or solar radiation.

All SCORPION rugged tablets and handhelds are already offered with a MIL-STD-810G certification as a standard, which among others grants them a drop resistance of
up to 1.5 meters.

Testing method	Content
501.5	High temperature
502.5	Low temperature
503.5	Temperature shock
504.1	Contamination by liquids
507.5	Humidity
510.5	Sand and dust
514.6	Vibrations

What does the IP rating mean?

IP XX

All-round protection
no extra-protective cover needed

1. Digit	Protection against contact and dirt
0	Not protected
1	Protected against large-surface contact and solid foreign bodies (≥ 50mm)
2	Protected against contact with fingers and solid foreign bodies (≥ 12.5mm)
3	Protected against contact with tools and solid foreign bodies (≥ 2.5mm)
4	Protected against contact with wires and solid foreign bodies (≥ 1.0mm)
5	Complete protection against any direct contact as well as against dust in harmful quantities
6	Complete protection against contact and dust

2. Digit	Water protection
0	Not protected
1	Protected from vertically falling dripping water
2	Protected against falling dripping water, with housing inclination up to 15°
3	Protected against falling spray water up to 60° from the vertical
4	Protected from splashing water on all sides
5	Protected against water jets from any angle
6	Protected against strong jets of water
7	Protected against temporary submersion in water
8	Protected against continuous submersion in water up to 1 meter depth (unless otherwise specified)
9	Protected from water during high-pressure and steam cleaning

All SCORPION models have at least an
IP65 rating, which can reach
up to IP67 for some devices.

Comparison Table

All SCORPION models in direct comparison

Model	SCORPION 12 PRO	SCORPION 12″
Display Size	12.2 Inches (30,98 cm) IPS TFT LCD	12.2 inches (30.98cm)
Resolution	1,920 x 1,200	1,920 x 1,200
Touchscreen	10-Point Projected Capacitive	10-point capacitive
Brightness	400 nits	280 nits
Processor	Intel® Core™ i5-1235U Deca Core	Intel® Celeron® N5100 Quad-Core (Windows) / Qualcomm MSM8953 (Android)
Memory	16GB LPDDR4	8GB LPDDR4 (8GB for Windows)
Storage Capacity	256GB	128GB eMMC
Operating System	Windows 11	Windows 11 or Android 11
I/O	1x USB 3.0 Type A 1x USB 3.0 Type C 1x HDMI 1.4a Type C 1x 3.5mm standard earphone jack 1x TF slot (max. 128GB) for SDHC/SDXC 1x SIM-Slot 1x 12pin POGO pin	1x RJ-45 LAN 1x USB 2.0, 2x USB 3.0, 1x USB Type C 1x HDMI 1.4a Type C 1x RS-232 (COM1), 1x RS-485 (COM2) 1x micro SIM slot 1x microSD slot 2x speakers + Audio-out
Barcode Reader	1D / 2D	1D / 2D
Camera	Front Camera : 2.0 MP Rear Camera : 8.0 MP	5MP (front) / 8MP (rear) - (Windows) 5MP (front) / 13MP (rear) - (Android)
Battery	1x 700mAh / 7.4V (Built-in) 1x 6,300mAh / 7.4V (Removable)	Windows: 6,300 mAh, 7.4 Volt, (hot swap) + 1,000 mAh, 7.4 Volt (internal) / Android: 12,600 MAh, 3.7 Volt, (removable)
Operating Temp.	-20°C ~ 60°C	-20° ~ 60°C
Resistances	IP65 + MIL-STD-810G	IP65 + MIL-STD-810G
Accessories (optional)	1x Hand strap 1x Power Cable optional: Removable battery, mounting holder, docking station, power adapter	Dockable keyboard, spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mounting, vehicle charging cable, shoulder belt, backstrap

SCORPION 10X PRO	SCORPION 10X V2
10.1 inches (25.65cm)	10.1 inches (25.65cm)
1,920 x 1,200	1,920 x 1,200 (Windows) / 1,280 x 800 (Android)
10-point capacitive	10-point capacitive
800 nits (sunlight readable)	700 nits (sunlight readable)
Intel® Celeron® Tiger Lake UP3 6305E or Core™ i5-1135G7 / i3-1115G4	Intel® Celeron® N5100 Quad Core (Windows) / MTK MT6789 CPU (Android)
4GB DDR4 (Celeron®) or 8GB (Core™)	8GB LPDDR4
128GB M.2 SSD (Celeron® 6305E) or 256GB M.2 SSD (Core™ i5)	128GB eMMC
Windows 10 IoT	Windows 11 or Android 12
1x USB 3.1 1x HDMI 1x COM or 1x USB 3.0 or 1x LAN via optional modules 1x Nano SIM slot 1x 2W speakers + Audio-out	1x COM or 1x USB 2.0 or 1x LAN via optional modules 1x USB 3.0 Type A, 1x USB Type C 1x HDMI 1.4a Type C 1x SD slot up to 128GB 1x SIM slot 1x Audio-out
1D / 2D (optional)	1D / 2D
2MP (front) IR camera supporting Windows Hello / 8MP (rear) with LED flash light	5MP (front) / 8MP (rear) - (Windows) 5MP (front) / 13MP (rear) - (Android)
Removable battery pack: 11.4V / 4,630mAh 52W Li-polymer (3S1P) Hot swap battery pack: 3.7V 1,100mAh	5,000 mAh, 7.6 Volt, removable (Windows) 5,000mAh, 3.8V removable (Android)
-29° ~ 60°C (DC); -10° ~ 50°C (battery)	-20° ~ 60°C
IP65 + MIL-STD-810H + MIL-STD-461G	IP65 + MIL-STD-810G
Battery charging station, 1D/2D scanner, office docking, hand strap, stylus, vehicle mounting	Office docking, 1D/2D scanner, vehicle mount, power adapter, shoulder strap, spare battery

Comparison Table

All SCORPION models in direct comparison

Model	SCORPION 10″ SLIM Android	SCORPION 8X V2
Display Size	10.1 inches (25.65cm)	8.0 inches (20.32cm)
Resolution	1,920 x 1,200	1,280 x 800 (Windows), 1,920 x 1.200 (Android)
Touchscreen	10-point capacitive	5-point capacitive (Windows), 5-point PCAP touch, G+G (Android)
Brightness	400 nits (min.)	700 nits (Windows), 550 nits (Android)
Processor	MT8788 Octa-Core (Quad-Core Cortex A73 2.0GHz / Quad-Core Cortex A53 2.0GHz)	Intel® Celeron® N5100 Quad Core (Windows), MediaTek MT6789 (Android)
Memory	4GB LPDDR 4X	8GB LPDDR4
Storage Capacity	64GB / 128GB	128 GB eMMC (Windows), 128 GB (Android)
Operating System	Android 11	Windows 10, Android 12
I/O	1x USB Type A, 1x USB Type C 1x Micro HDMI Mode 1: 2x Nano SIM, Mode 2: 1x Nano SIM + microSD 1x speaker + 2x microphones 1x microSD slot	Windows: 1x USB 3.0 Type A, 1x USB Type C 1x HDMI 1.4a Type C 1x TF slot max. 128GB for SDHC/SDXC 1x SIM slot 1x 12-pin POGO connector 1x 3.5mm standard headphone jack Android: 1x USB 2.0 Type A, 1x USB Type C 1x TF slot max. 512GB 2x SIM slots 1x 12-pin POGO connector 1x 3.5mm standard headphone jack
Barcode Reader	1D / 2D (included)	1D / 2D (optional)
Camera	8MP (front) / 13MP (rear) or 21MP (optional) with flash light	Front Camera: 5.0 MP Rear Camera: 8.0 MP (Windows), 13.0 MP (Android)
Battery	10,000 mAh, 3.8 Volt, hot swap, 1,000 mAh, internal	Windows: 5,000 mAh/7.6 V (Removable) Android: 10,000 mAh/3.8 V (Removable)
Operating Temp.	-10° ~ 50°C	-20° ~ 60°C
Resistances	IP65	IP65
Accessories (optional)	Multi I/O docking, office docking, hand strap	Removable Battery, Mounting Holder, Docking Station, Power Adapter, Vehicle Charger

SCORPION 6"

6.0 inches (15.24cm)

1,280 x 720

5-point capacitive

430 nits

Intel® Atom™ Cherry Trail Z8350 (Windows) or Qualcomm MT8735B Quad-Core Cortex A53, 1.45GHz (Android)

4GB

64GB

Windows 10 LTSC 2019 or
Android 10

1x USB-C
1x micro-SIM slot
1x microSD slot
1x speaker + Audio-out

1D / 2D (included)

2MP (front) / 5MP (rear) - (Windows)
2MP (front) / 8MP (rear) - (Android)

5,000 mAh, 3.7 Volt, removable (Windows),
5,000 mAh, 3.7 Volt (Android)

-10° ~ 50°C

IP67 + MIL-STD-810G

Spare battery, power adapter and cable, office docking, multi-docking cradle, pistol grip, active mount, active pistol grip mount, vehicle power adapter, stylus, shoulder/belt pouch, 1D/2D Scanner (incl.)